UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,648	09/26/2003	Mikhail A. Dmitriev	SUN-P9367-SPL	7879

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EXAMINER
NAHAR, QAMRUN

ART UNIT	PAPER NUMBER
2191	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/03/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>26 September 2003</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-33</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-33</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>26 September 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>09/26/2003</u>.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

1. Claims 1-33 have been examined.

Specification

2.   The disclosure is objected to because of the following informalities: on pg. 1, lines 27-28,

replace the phrase "TO BE ASSIGNED" with the actual application serial number and the actual

filing date.

Appropriate correction is required.

3.   The use of the trademarks JAVA and JVM has been noted in this application. They

should be capitalized wherever they appear and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the

marks should be respected and every effort made to prevent their use in any manner which might

adversely affect their validity as trademarks.

4.   The disclosure is objected to because it contains an embedded hyperlink and/or other

form of browser-executable code, for example, see line 13 of pg. 4. Applicant is required to

delete the embedded hyperlink and/or other form of browser-executable code. See MPEP §

608.01.

Claim Objections

5.   Claims 4, 15 and 26 are objected to because of the following informalities: "is true **is**

true" on line 8 of the claims, respectively, should be "is true". Appropriate correction is

required.

Claim Rejections - 35 USC § 112

6.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

7.   Claims 4-6, 11, 15-17, 22, 26-28 and 33 are rejected under 35 U.S.C. 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject

matter which applicant regards as the invention.

8.   Claims 4, 15 and 26 recite the limitation "the instrumented once or more flag" in lines 6-7

of the claims, respectively. There is insufficient antecedent basis for this limitation in the claim.

Therefore, this limitation is interpreted as "the executed-once-or-more flag".

9.   Claims 5, 16 and 27 recite the limitation "the call site" in line 5 of the claims. There is

insufficient antecedent basis for this limitation in the claim. Therefore, this limitation is

interpreted as "a call site".

        Claims 6, 17 and 28 are rejected for dependency upon rejected base claims 5, 16 and 27,

respectively, above.

10.   Claims 11, 22 and 33 contain the trademark/trade name JAVA. Where a trademark or

trade name is used in a claim as a limitation to identify or describe a particular material or

product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph.

See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the

trademark or trade name cannot be used properly to identify any particular material or product.

A trademark or trade name is used to identify a source of goods, and not the goods themselves.

Thus, a trademark or trade name does not identify or describe the goods associated with the

trademark or trade name. In the present case, the trademark/trade name is used to

identify/describe code and, accordingly, the identification/description is indefinite.

Claim Rejections - 35 USC § 101

11.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or
> any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and
> requirements of this title.

12.   Claims 12-33 are rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter.

13.   Claim 12 reciting a "computer-readable storage medium", is not limited to tangible

storage devices in view of pg. 8, par. 31, lines 1-9, in the instant specification, which suggests

that such a medium may be a carrier wave or transmission medium (intangible). Accordingly,

claim 12 does not recite tangible manufactures, and are non-statutory subject matter.

As per claims 13-22, these claims are rejected for failing to cure the deficiencies of the

above rejected base claim 12.

14.   Claim 23 recites "An apparatus ... mechanism ... ", however, the mechanism(s) appear

to be software alone, lacking the necessary physical components (hardware) to constitute a

machine or a manufacture under 101. Since claim 23 is clearly not a process or a composition of

matter, it appears to fail to fall within a statutory category and thus non-statutory.

Claims 24-33 are rejected for failing to cure the deficiencies of the above rejected non-

statutory claim 23.

Double Patenting

15.   The nonstatutory double patenting rejection is based on a judicially created doctrine
grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or
improper timewise extension of the "right to exclude" granted by a patent and to prevent possible
harassment by multiple assignees.   A nonstatutory obviousness-type double patenting rejection
is appropriate where the conflicting claims are not identical, but at least one examined
application claim is not patentably distinct from the reference claim(s) because the examined
application claim is either anticipated by, or would have been obvious over, the reference
claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re
Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225
USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re
Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163
USPQ 644 (CCPA 1969).
       A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may
be used to overcome an actual or provisional rejection based on a nonstatutory double patenting
ground provided the conflicting application or patent either is shown to be commonly owned
with this application, or claims an invention made as a result of activities undertaken within the
scope of a joint research agreement.
       Effective January 1, 1994, a registered attorney or agent of record may sign a terminal
disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR
3.73(b).

16.   Claims 1-33 are provisionally rejected on the ground of nonstatutory obviousness-type

double patenting as being unpatentable over claims 1-30 of copending Application No.

10/654522 in view of Bennett (U.S. 6,934,935). The following example is given:

Claim 1 of Application No. 10/654522	Claim 1 of instant application
A method for dynamically configuring selected methods for instrument-based profiling at run-time, comprising:	A method for dynamically configuring selected methods for instrument-based profiling at run-time, comprising:
identifying a root method in a target application, wherein methods that are reachable from the root method during execution of the target application are to be instrumented;	identifying a root method in a target application, wherein only methods that are reachable from the root method during execution of the target application are to be instrumented;
upon loading of a new method during execution of the target application, identifying methods in the target application that become reachable from the root method through the new method; and	upon executing a given instrumented method, determining if the given instrumented method is about to be executed for the first time,
instrumenting methods that are reachable, loaded and have not been instrumented before.	and if so, instrumenting methods that, are called by the given instrumented method, are loaded, and have not been instrumented before.

Claim 1 of instant application further teaches that instrumenting the root method after it is

identified. Claim 1 of Application No. 10/654522 does not explicitly teach that instrumenting

the root method after it is identified. Bennett teaches that instrumenting the root method after it

is identified (column 6, lines 23-39 and column 15, lines 2-7).

It would have been obvious to one having ordinary skill in the computer art at the time of

the invention was made to modify the method disclosed by claim 1 of Application No.

10/654522 to include that instrumenting the root method after it is identified using the teaching

of Bennett. The modification would be obvious because one of ordinary skill in the art would be

motivated to profile a calling-function/parent node to a called-function/child node (column 4,

line 62 to column 5, line 9).

This is a <u>provisional</u> obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 102

17.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
patent by another filed in the United States before the invention by the applicant for patent, except that an
international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
subsection of an application filed in the United States only if the international application designated the United
States and was published under Article 21(2) of such treaty in the English language.

18.   Claims 1-10, 12-21 and 23-32 are rejected under 35 U.S.C. 102(e) as being anticipated by

Bennett (U.S. 6,934,935).

Per Claim 1:

The Bennett patent discloses:

- identifying a root method in a target application, wherein only methods that are

reachable from the root method during execution of the target application are to be

instrumented; instrumenting the root method after it is identified ("... a calling-

function/parent node to a called-function/child node ..." in column 4, line 62 to column 5, line 9)

- and upon executing a given instrumented method, determining if the given instrumented

method is about to be executed for the first time, and if so, instrumenting methods that, are

called by the given instrumented method, are loaded, and have not been instrumented

before ("... insert profiling monitoring code ..." in column 6, lines 23-39; and "... The user can

click on a function name to select it, as shown with the function "main" identified by reference

numeral 935. ... When a function is selected, the complete name of the selected function is

displayed beneath detail display pane 910, and the selected function together with its displayed

parents and children are spotlighted in overview pane 905 ..." in column 14, line 56 to column

15, line 12).

Per Claim 2:

The Bennett patent discloses:

- wherein identifying the root method involves allowing a user to specify the root method

(column 15, lines 2-7).

Per Claim 3:

The Bennett patent discloses:

- wherein determining if the given instrumented method is about to be executed for the first time involves executing instrumentation code within the given instrumented method, wherein the instrumentation code is executed whenever the given instrumented method is called, and is executed before any other instructions of the given instrumented method are executed (column 15, lines 1-12).

Per Claim 4:

The Bennett patent discloses:

- wherein the instrumentation code checks a global executed-once-or-more flag associated with the given instrumented method, which is initially set to false; wherein if the executed-once-or-more flag is false, the instrumentation code knows that the given instrumented method has not been called before, so it performs instrumentation operations as necessary and sets the executed-once-or-more flag to true; and wherein if the executed-once-or-more flag is true is true, the instrumentation code does not perform instrumentation operations (column 14, line 56 to column 15, line 12).

Per Claim 5:

The Bennett patent discloses:

- **wherein if a call to a virtual method is encountered in a given instrumented method that is about to be executed for the first time, the method further comprises: identifying a class for the virtual method based upon an object type associated with a call site; and instrumenting methods corresponding to the virtual method in the identified class and in associated subclasses** (column 15, lines 1-12).

Per Claim 6:

The Bennett patent discloses:

- **wherein if the identified class does not have an implementation of the virtual method, the method additionally involves identifying a nearest superclass of the identified class that has an implementation of the virtual method** (column 15, lines 7-12).

Per Claim 7:

The Bennett patent discloses:

- **wherein instrumenting a method involves dynamically patching the method while the target application is executing** (column 6, lines 23-39).

Per Claim 8:

The Bennett patent discloses:

- wherein instrumenting a method involves inserting profiling instrumentation code into the method, wherein the profiling instrumentation code includes: method entry code that takes a first time measurement at the beginning of a method; method exit code that takes a second time measurement at the end of the method; and wherein the first and second time measurements are used to calculate an execution time for the method (column 6, lines 23-39 and column 14, lines 41-55).

Per Claim 9:

The Bennett patent discloses:

- wherein the method entry code determines if the given instrumented method is about to be executed for the first time (column 6, lines 23-39).

Per Claim 10:

The Bennett patent discloses:

- wherein the tasks of identifying methods and instrumenting methods are performed by a remote profiler client that communicates with a virtual machine executing the target application (column 5, line 60 to column 6, line 13).

Per Claims 12-21:

These are computer-readable storage medium versions of the claimed method discussed

above (claims 1-10, respectively), wherein all claim limitations also have been addressed and/or

covered in cited areas as set forth above. Thus, accordingly, these claims are also anticipated by

Bennett.

Per Claims 23-32:

These are apparatus versions of the claimed method discussed above (claims 1-10,

respectively), wherein all claim limitations also have been addressed and/or covered in cited

areas as set forth above. Thus, accordingly, these claims are also anticipated by Bennett.

Claim Rejections - 35 USC § 103

19.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

20.   Claims 11, 22 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bennett (U.S. 6,934,935) in view of Angel (U.S. 6,314,558).

Per Claim 11:

The rejection of claim 1 is incorporated, and further, Bennett does not explicitly teach

wherein code that makes up the target application includes platform-independent JAVA

bytecodes. Angel teaches wherein code that makes up the target application includes platform-independent JAVA bytecodes (column 3, lines 15-20).

It would have been obvious to one having ordinary skill in the computer art at the time of the invention was made to modify the method disclosed by Bennett to include wherein code that makes up the target application includes platform-independent JAVA bytecodes using the teaching of Angel. The modification would be obvious because one of ordinary skill in the art would be motivated to be able to instrument bytecode to provide instrumentation for a plurality of source code languages and a plurality of machines that all make use of the bytecode (Angel, column 3, lines 9-13).

Per Claim 22:

This is a computer-readable storage medium version of the claimed method discussed above, claim 11, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also obvious.

Per Claim 33:

This is an apparatus version of the claimed method discussed above, claim 11, wherein all claim limitations also have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, this claim is also obvious.

Conclusion

21.   Any inquiry concerning this communication from the examiner should be directed to

Qamrun Nahar whose telephone number is (571) 272-3730. The examiner can normally be

reached on Mondays through Fridays from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wei Y Zhen, can be reached on (571) 272-3708. The fax phone number for the

organization where this application or processing is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the TC 2100 Group receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

QN
March 30, 2007

WEI ZHEN
SUPERVISORY PATENT EXAMIN'